

Hole, and parallel to it, and then (with its white part) through an oblong Hole H, whose breadth is about the fortieth or sixtieth part of an Inch, and which is made in a black opake Body GI, and placed at the distance of two or three Feet from the Prism, in a parallel situation both to the Prism and to the former Hole, and if this white Light thus transmitted through the Hole H, fall afterwards upon a white Paper pt, placed after that Hole H, at the distance of three or four Feet from it, and there paint the usual Colours of the Prism, suppose red at t, yellow at s, green at r, blue at q, and violet at p; you may with an iron Wire, or any such like slender opake Body, whose breadth is about the tenth part of an Inch, by intercepting the rays at k, l, m, n or o, take away any one of the Colours at t, s, r, q or p, whilst the other Colours remain upon the Paper as before; or with an obstacle something bigger you may take away any two, or three, or four Colours together, the rest remaining: So that any one of the Colours as well as violet may become outmost in the confine of the shadow towards p, and any one of them as well as red may become outmost in the confine of the shadow towards t, and any one of them may also border upon the shadow made within the Colours by the obstacle R intercepting some intermediate part of the Light; and, lastly, any one of them by being left alone may border upon the shadow on either hand. All the Colours have themselves indifferently to any confines of shadow, and therefore the differences of these Colours from one another, do not arise from the different confines of shadow, whereby Light is variously modified as has hitherto been the Opinion of Philosophers.

phers. In trying these things 'tis to be observed, that by how much the Holes F and H are narrower, and the intervals between them, and the Prism greater, and the Chamber darker, by so much the better doth the Experiment succeed; provided the Light be not so far diminished, but that the Colours at pt be sufficiently visible. To procure a Prism of solid Glass large enough for this Experiment will be difficult, and therefore a prismatick Vessel must be made of polished Glass-plates cemented together, and filled with Water.

EXPER. II.

The Sun's Light let into a dark Chamber through *Fig. 2.* the round Hole F, half an Inch wide, passed first through the Prism ABC placed at the Hole, and then through a Lens PT something more than four Inches broad, and about eight Feet distant from the Prism, and thence converged to O the Focus of the Lens distant from it about three Feet, and there fell upon a white Paper DE. If that Paper was perpendicular to that Light incident upon it, as 'tis represented in the posture DE, all the Colours upon it at O appeared white. But if the Paper being turned about an Axis parallel to the Prism, became very much inclined to the Light as 'tis represented in the positions *de* and *de*; the same Light in the one case appeared yellow and red, in the other blue. Here one and the same part of the Light in one and the same place, according to the various inclinations of the Paper, appeared in one case white, in another yellow or red, in a third blue, whilst the confine of Light and
L 2 Shadow,